The Space Interferometry Mission

The Space Interferometry Mission (SIM) is a $1B class observatory funded by NASA for launch in 2008. The instrument consists of a 3 high-precision Michelson stellar interferometers tied together with 0.1 nm knowledge by an optical truss. Designed to precisely measure the positions and motions of stars, SIM will perform astrophysics of our galaxy, measure the distances to other galaxies, and detect terrestrial-mass planets around nearby stars.

Technology development has been underway for ~ 8 years and great progress has been made in picometer-class metrology. A substantial testbed program is in place to demonstrate the necessary technologies, at both the component and system level, prior to beginning the implementation phase of the mission. JPL is the lead institution in a unique partnering arrangement with Lockheed-Martin and TRW.